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Candling and Cartoning EGGS at Country Plants

MARKETING RESEARCH REPORT NO. 366

United States Department of Agriculture

Agricultural Marketing Service

Marketing Research Division

PREFACE

Costs of candling and cartoning eggs at country points were studied as part of a broad program of research designed to help reduce costs of marketing farm products. This report provides information on the comparative costs of two methods of marketing eggs and shows that one of them, under certain conditions, provides opportunities for substantial savings through elimination of unnecessary operations.

The author is grateful to the many egg assemblers and producers who contributed the basic data on which this report is based. He is especially grateful to the managers of the seven midwestern egg assembly plants located in Minnesota, Iowa, and Wisconsin, whose private records were made available for this study and who willingly answered many questions on their operations.

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distant during these 2 months, some in 30-dozen cases, loose pack, wholesale graded; others in 1-dozen cartons, consumer graded; and some in both ways. Other firms in the Midwest and East provided much additional information on operating costs and practices to supplement the seven case studies.

This report presents details of the costs of marketing eggs under alternative methods and of the most important requirements for successful operation of a country plant distributing cartoned eggs to distant markets.

COMPARATIVE COSTS AND RETURNS

Cost Comparisons.—Total costs of assembling, candling, cartoning, and shipping cartoned eggs to retail stores or retail store warehouses in the East averaged 12.2 cents a dozen for the seven midwestern plants in June and November 1957 (table 1). This amount was

TABLE 1.—*Eggs, shell: Cost per dozen of handling midwestern and New Jersey eggs cartoned in or near producing areas, as compared with shipping midwestern eggs loose and cartoning in eastern cities, June and November 1957*

Type of expense and type of handler	Eggs cartoned in midwestern plants	Midwestern eggs cartoned in eastern plants	New Jersey eggs cartoned by plants in producing areas
Midwestern country assembler	*Cents*	*Cents*	*Cents*
Pickup from farm	1.2	1.0	0.5
Plant labor	2.7	1.8	2.3
Cases, flats, and fillers	1.3	1.9	1.0
Cartons	2.6	.0	2.3
General and administrative	.6	.6	.6
Commissions (buying)	.0	.7	.0
Marketing or selling expense	.4	.0	.5
Overhead	1.0	.6	1.0
Freight charges	2.4	2.9	1.5
Eastern wholesaler or chainstore egg plant			
Plant labor	----------	2.5	----------
Cartons and other supplies	----------	2.6	----------
Replacement costs to meet consumer grade standards	----------	1.4	1.5
All other expenses	----------	2.2	----------
Total	12.2	18.2	11.2

6 cents a dozen below the cost of 18.2 cents a dozen incurred by a combination of midwestern plants and egg handlers in the East on eggs shipped loose from the Midwest and candled again and cartoned in the consuming market. A detailed comparison of costs of marketing eggs is shown in table 1 for three different systems of marketing: (1) Eggs cartoned in midwestern plants and shipped to distant cities, (2) eggs candled and packed loose in the Midwest and recandled and cartoned in eastern city plants, and (3) eggs produced, candled, and cartoned at several New Jersey shipping points and marketed in

nearby cities. In all three systems, total costs of marketing up to and including delivery to retail stores or retail store warehouses are shown.

There are no great differences between costs of marketing eggs cartoned in midwestern producing areas and eggs cartoned at country points in New Jersey, except for freight and replacement costs to meet consumer Grade A standards. This comparison indicated a strong possibility of equality between the two areas or similar areas in getting eggs into highly concentrated consuming areas, when the eggs are cartoned at country plants.

TABLE 2.—*Eggs, shell: Expense per dozen of procurement, plant operations, marketing or selling, overhead, and transportation, 7 midwestern egg assembly plants, June and November 1957*

Type of expense	Volume (thousand dozen)							
	1,903	1,742	1,126	1,154	581	347	196	241
	Total		Shipped cartoned		Shipped loose		Sold f.o.b. plant	
	June	Nov.	June	Nov.	June	Nov.	June	Nov.
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Procurement:								
Truck expense	0. 6	0. 7	0. 6	0. 7	0. 6	0. 7	0. 6	0. 7
Salaries and wages	. 5	. 5	. 5	. 5	. 5	. 5	. 5	. 5
Total	1. 1	1. 2	1. 1	1. 2	1. 1	1. 2	1. 1	1. 2
Plant labor	2. 3	2. 3	*2. 6*	*2. 7*	*1. 8*	*1. 9*	1. 8	1. 9
Cases, flats, fillers	1. 4	1. 3	1. 4	1. 3	1. 4	1. 3	1. 4	1. 3
Cartons	1. 4	1. 7	*2. 5*	*2. 6*	*. 0*	*. 0*	. 0	. 0
General and administrative	. 5	. 6	. 5	. 6	. 5	. 6	. 5	. 6
Inspection	. 1	. 1	. 1	. 1	. 1	. 1	. 1	. 1
Marketing or selling expense	. 5	. 4	. 5	. 4	. 5	. 4	. 5	. 4
Overhead	. 7	. 9	. 7	. 9	. 7	. 9	. 7	. 9
Freight	2. 2	2. 1	2. 5	2. 4	2. 5	2. 4	. 0	. 0
Total expense	10. 2	10. 6	11. 9	12. 2	8. 6	8. 8	6. 1	6. 4
Gross margin	10. 8	11. 0	12. 5	12. 7	8. 8	7. 6	7. 6	8. 4
Net to management	. 6	. 4	. 6	. 5	. 2	−1. 2	1. 5	2. 0

Freight was about 1 cent a dozen higher for midwestern eggs, but this was offset, at the time of the study at least, by the higher cost for replacement of New Jersey eggs to meet consumer Grade A standards. This replacement was necessary because the midwestern eggs were purchased under compulsory State grading systems whereas New Jersey eggs were only producer-sized during this period.

Operating Expenses.—The average cost per dozen for procurement, plant operations, marketing or selling, overhead, and transportation, for eggs shipped cartoned, those shipped loose, and those sold f.o.b. by seven midwestern plants during June and November 1957 are shown in table 2. The more important figures are in italics.

PROCUREMENT COSTS

Egg procurement costs for the seven midwestern plants in June and November 1957 were about the same whether the eggs were sold cartoned or loose.

Procurement costs on eggs later sold in cartons may have been slightly less than on other eggs because some plants selected eggs for cartoning from only the better managed farms. These producers were observed to have modern, well-kept laying houses in which they kept highly recommended breeds or strains of layers. Many of them had egg coolers. The number of cases of eggs picked up at these farms was higher than at most farms. This permitted truck drivers to spend less time in pickup per case, which resulted in lower assembly costs.

On the other hand, on many farms where the pickup was one case or less, hens were housed in makeshift buildings with little or no modern equipment. Quite often, particularly in June when prices were low, the laying hens were running loose in the yard, foraging for food. Many of the eggs picked up at these farms were dirty, and eggs were in baskets on porches where the temperature was high or were being washed just as the pickup trucks arrived. The quality of eggs coming from such farms was generally low and the cost of assembly high. Bypassing or not accepting the eggs until quality is improved by this type of producer might permit a more efficient operation and result in better quality eggs.

ASSEMBLY PLANT COSTS

Plant Labor.—The cost of plant labor in the seven plants varied widely, from a high of 2.7 cents a dozen for cartoned eggs to a low of 1.8 cents a dozen for eggs packed loose, as shown in table 2. Some plant managers achieved lower candling costs by channeling eggs from those producers known to have a consistently high-quality product to the plant's most experienced candlers. High-quality eggs can be candled with more speed and less error than low-quality eggs. Another advantage of this arrangement is that it provides more assurance of a high-quality pack of eggs in the cartons. Candlers of these eggs usually were instructed to candle "tight." This means that eggs which would be considered Grade A, but on the low side, would be placed in with Grade B eggs by the candler rather than with the A's. However, very few of the eggs coming from these producers would be on the low side. This was not done with the loose eggs, because they were scheduled either to travel shorter distances, or, if shipped long distances, to be recandled at destination.

Cases, Flats, and Fillers.—The cost of cases, flats, and fillers varied among plants, depending upon the type and size of materials used. Generally, the lower the number of cartons packed in the cases, the higher the cost per dozen. These variations necessitated the computation of average costs based on all types of cases. Data indicate, however, that this item of cost is somewhat higher for cartoned eggs than for loose eggs, particularly since 15- and 24-dozen cases generally are used for cartoned eggs.

Carton Costs.—Country point candling showed no advantage in carton costs. There are variations in cost depending upon the type of

carton used. Most carton manufacturers also grant discounts on the basis of volume purchased annually.

General and Administrative Expenses.—The general and administrative expenses were about 0.5 cent a dozen and were fairly consistent from company to company. This is for plant operations only and does not include general overhead.

Inspection Expense.—Inspection expense, a minor item, is about 0.1 cent a dozen. Managers were nearly unanimous in saying that this expense is more than paid for by better consumer acceptance because of the USDA inspection mark on the egg carton.

Marketing or Selling Expense.—The costs of selling cover a variety of items such as salesmen's salaries, telephone calls in selling, travel expense as it applies to selling, advertising, and attendance at conventions. This group of items averaged about 0.5 cent a dozen. This may be slightly higher for cartoned eggs than for loose eggs, but the difference, if any, is difficult to determine and is too small to be significant.

Overhead Expense.—Overhead for most of the firms was a charge assigned to the assembly plant by the main office. This was an arbitrary charge including allocation of salaries of top management, expense of operating headquarters offices, and similar items. This cost is slightly higher for those companies with large general headquarters managing the marketing and distribution of many food items.

Transportation Expense.—Freight costs averaged about 2.5 cents a dozen for all eggs shipped out. This is an item difficult to compare among plants and as between cartoned eggs and loose eggs. Some cartoned eggs and some loose eggs are shipped long distances, others short distances. However, in these case studies, nearly all undergrade eggs were sold f.o.b. plant. This was possible because all of the companies were candling and cartoning consumer grades. When eggs are cartoned at destination instead of shipping points, it is quite common to ship wholesale grades which include many undergrades, necessitating the payment of freight on additional quantities.[2]

Gross Margin.—The gross margin of the assembler-shipper is the difference between the price paid the producer at the farm and the delivered price to the first receiver in the consuming area.

Net to Management.—Net to management is the difference between total expense and gross margin. This item is equivalent to net profit before taxes. Managements of the plants studied netted 0.6 cent a dozen in June and 0.5 cent in November for eggs shipped cartoned. For eggs shipped loose, they received a net of 0.2 cent a dozen in June and had a loss of 1.2 cents in November. The total expense of handling undergrade eggs was low when no freight charge was involved, old cases were used, and selling prices were high because of proximity to breaking, drying, and freezing plants; therefore, the net to management was 1.5 cents a dozen in June and 2.0 cents in November. This helped to offset the low net and minus returns on eggs shipped loose, and resulted in average net returns on all eggs of 0.6 cent a dozen in June and 0.4 cent a dozen in November.

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[2] Additional information on freight may be found in Bulletin 472, Transportation of Poultry and Poultry Products from the North Central States, published October 1958 by the Agricultural Experiment Station, South Dakota State College, Brookings.

GENERAL DIFFERENCES BETWEEN THE TWO METHODS OF OPERATION

In summary, the major savings in costs between country-point candling and cartoning and the traditional system of egg marketing are approximately as follows:

Item	Saving *Cents per dozen*
Plant labor	1. 8
Replacement costs to meet consumer Grade A standards	1. 4
Additional overhead	2. 2
All other cost items	0. 6
Total	6. 0

The saving in plant labor is the direct result of elimination of the candling operations in the consuming area. The saving in egg replacement costs is the result of cartoning eggs into consumer grades at the country plant. Country-point candling provides savings also by elimination of fillers.

The saving of 2.2 cents a dozen on overhead is possible only where the cartoned eggs are delivered directly to retail stores or retail store warehouses. If a separate distribution facility must be maintained in the consuming area, this saving disappears.

REQUIREMENTS FOR SUCCESSFUL CARTONING OF EGGS AT COUNTRY POINTS

This study has shown that a saving of 6 cents a dozen in marketing costs for midwestern eggs is possible when the eggs are cartoned in some midwestern plants. However, this does not mean that a more or less mechanical change in practices necessarily will be successful. Many firms that have tried cartoning in their midwestern plants have failed, and have returned to shipping loose eggs only. These failures probably were due mostly to poor methods of procurement and to lack of an established dependable market. High-quality eggs are essential for success in this method of marketing. Successful firms have introduced egg quality control programs on farms and have enforced them until they are getting Grade A yields of 90 percent and better, consistently throughout the year. Furthermore, most of these eggs are high in the Grade A range and will hold their quality as they move the long distances to retail stores.

Another requirement for success in this field is the ability to supply customers with top quality eggs in all seasons regardless of weather or other factors. Size of the assembly firm is important only as it affects its ability to meet the demand of its market at all times. Chainstores, dairies, independent supermarkets, and other types of buyers are interested in a sufficient supply of top quality eggs, not only in January, February, and other months of normally heavy production but especially in July and August, the principal season of normally light output.

The volume of eggs handled by this type of buyer is becoming more important and, as it increases, additional suppliers appear to meet the demands. In some cases, contractual arrangements, either written or oral, have been entered into between buyer and seller on a long-term basis. The buyer may agree to pay a certain amount over "the market" to a seller provided the seller guarantees a suffi-

cient supply of top quality eggs to meet the buyer's needs at all times. This type of arrangement provides both buyer and seller with a more workable and mutually satisfactory arrangement so that they do not have to shop around from day to day to find eggs or find a market for eggs. Producers benefit from such a program because, if they follow the requirements of a high-quality program, they usually receive a higher average price for eggs.

The saving of 6 cents a dozen could not have been accomplished without effective programs for quality production, quality maintenance through the marketing channels, and development of direct movement of eggs from assembler to retailer. To meet the challenge of competition from other areas, eggs must be able to meet the test of Grade A quality should they be checked by qualified inspectors in the retail store.

APPENDIX

Range of Gross Margins, Expenses, and Net to Management for Seven Plants, June and November 1957

Table 3 shows the range of gross margins, expenses, and net to management for seven plants for June and November 1957. The range in gross margins, from about 11.0 cents a dozen to 14.5 cents for cartoned eggs and about 6.0 to 11.0 cents for loose eggs, was generally due to the ability of some firms to find an exceptionally good market for eggs. Total expenses ranged from 10 cents to 13 cents a dozen for cartoned eggs and 7 to 10 cents for loose eggs.

These wide variations among firms in both gross margins and total expenses resulted in ranges in net operating margins of -1.0 to $+1.5$ cents for cartoned eggs and -3.3 to $+3.2$ cents for loose eggs.

The range of procurement expenses of 0.5 cent per dozen to 1.8 cents was due generally to variations in assembly costs because of differences in density of egg production in different areas. However, this is an area of expense where much improvement could be made. Further studies are needed to develop more efficient egg procurement and pickup policies and practices.

Plant labor ranged from 2.3 cents a dozen to 3.0 cents for cartoned eggs and 1.5 to 2.3 cents for loose eggs. There is considerable room for improvement for those firms on the high end of the range. This is a problem for management in the choice and arrangement of equipment to make the most economical use of the labor force.

Expenses for cases, flats, and fillers ranged from 0.6 cent per dozen to 2.2 cents. These figures could be misleading as it is quite possible that the higher figure might be the most economical if it resulted in much less breakage and a better acceptance of eggs in new cases in retail markets.

A range of 2.3 to 2.9 cents a dozen for cartons was due to the use of some cartons somewhat fancier in color and labeling than others. A study of effectiveness of carton design would be necessary to determine whether the high or the low figure was most economical.

The range in expenses for general and administrative costs and overhead represented differences in policies of the firms. Improvements in top managerial policy could probably reduce the high figure of 1.5 cents a dozen.

Freight expense is fairly standard, depending upon distance shipped. Negotiated rates are a factor in holding down this expense, but this problem was not studied in detail.

These data apply only to the cartoned and loose eggs handled by these plants and apply only up to the point where the eggs are sold and delivered, or to undergrades picked up at the plant. The cartoned eggs went directly into retail channels—that is, into retail stores, dairies, and other distributors of cartoned eggs—while many of the loose eggs, except those going to bakeries, hotels, restaurants, etc.,

had to be recandled, at additional expense, and incurred the usual carton expense.

Prices and Returns

Selling prices and gross margins of assemblers for eggs shipped cartoned from plants in midwestern producing areas were substantially higher than for eggs shipped loose from the same plants. Total combined marketing costs for midwestern assemblers and handlers at point of distribution were 6 cents a dozen less for cartoned eggs than for those shipped loose. The differences in gross margins were more than enough to offset the additional expense of cartoning. This indicates that, with proper management and handling of top quality eggs, midwestern assemblers can realize a larger net return for cartoned eggs than for loose eggs, and can pass on some of the saving to consumers or producers or both. This might reduce the spread in prices between producer and consumer.

Average selling prices, paying prices, and gross returns for eggs shipped by seven midwestern plants during June and November 1957 are shown in table 4.

Despite a much higher price level in November 1957 compared with June 1957, the average gross margin remained stable for cartoned eggs. The average margin on eggs shipped loose declined 1.2 cents a dozen in November compared with June, indicating better marketing opportunities at the higher price level for eggs shipped cartoned. The margin on loose eggs sold f.o.b. country plants increased 0.8 cent a dozen during the same period. These were mostly undergrade eggs.

Selling Prices, Purchase Prices, and Gross Margins for Eggs by Grade and Size and Cartoned and Loose [3]

Returns for cartoned eggs, as mentioned previously, were sufficiently higher than returns for loose eggs, handled by the same companies, to more than make up for the additional cost of cartons and additional labor necessary to pack in cartons. There were, however, some variations in gross margins between sizes of eggs, indicating better markets for certain sizes than for others depending upon whether they were cartoned or not. This situation is natural, since producers, particularly the more progressive ones, attempt to keep layers of different ages, some laying pullet eggs, others medium, and others large, in order to keep a steady supply of large eggs moving to buyers year-round. Currently, some producers start chicks during almost any month of the year. Average selling prices, paying prices, and gross margins by grade and size and cartoned and loose are shown in table 5.

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[3] The Dairy and Poultry Market News Egg Report published by the Chicago office of the U.S. Department of Agriculture, AMS, 536 South Clark Street, Chicago, Ill., on Mondays and Thursdays now shows prices received by shippers at Iowa-Minnesota shipping points in trucklots for extras, minimum 80 percent A, cases included, for bulk pack and cartoned pack. Typical of these reports is the one for May 11, 1959, which shows a premium of 7 cents per dozen to shippers for cartoned over bulk pack for large white eggs and a premium of 5 cents per dozen for large mixed eggs. Additional costs for cartoning amounted to 0.8 cent per dozen for labor and 2.5 cents per dozen for the cartons, leaving 3.7 cents per dozen for large white eggs and 1.7 cents per dozen for large mixed eggs to shippers for their use in paying premiums to producers or for other uses such as plant additions or new equipment.

Variations in Selling Prices, Purchase Prices, and Gross Margins by Plants, with Percentages of Sales Cartoned and Loose

Table 6 shows average selling prices, average paying prices, average gross margins, and percentages of sales cartoned and loose, by plants. The figures show considerable variations between plants, but it must be kept in mind that variations in volumes by size affect both the average selling price and the average paying price. The most important figures shown in table 6 are the gross margins for all eggs for each plant. The gross margins for all eggs are uniform between plants, considering the variations in volume by size.

TABLE 3.—*Eggs, shell: Range of gross margins, expenses, and net to management per dozen, 7 shippers, June and November 1957*

Item	Cartoned			Loose		
	Range		Average	Range		Average
	Low	High		Low	High	
	June 1957					
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Gross margin	11. 5	14. 7	12. 5	5. 8	9. 9	8. 8
Pickup at farm	. 5	1. 5	1. 1	. 5	1. 5	1. 1
Plant labor	2. 3	3. 0	2. 6	1. 5	2. 3	1. 8
Cases, flats, and fillers	. 6	2. 2	1. 4	. 6	2. 2	1. 4
Cartons	2. 3	2. 6	2. 5	0	0	0
General and administrative	. 3	. 9	. 5	. 3	. 9	. 5
Inspection			. 1			. 1
Marketing expense	. 4	. 7	. 5	. 4	. 7	. 5
Overhead	. 7	. 9	. 7	. 7	. 9	. 7
Freight	1. 7	3. 0	2. 5	1. 7	3. 0	2. 5
Total expense	10. 3	13. 2	11. 9	6. 9	9. 9	8. 6
Net operating margin	−1. 0	1. 5	. 6	−3. 3	. 8	. 2
	November 1957					
Gross margin	11. 1	14. 5	12. 7	6. 3	11. 1	7. 6
Pickup at farm	. 5	1. 8	1. 2	. 5	1. 8	1. 2
Plant labor	2. 3	2. 9	2. 7	1. 5	2. 0	1. 9
Cases, flats, and fillers	1. 7	2. 0	1. 3	. 7	2. 0	1. 3
Cartons	2. 3	2. 9	2. 6	0	0	0
General and administrative	. 3	. 9	. 6	. 3	. 9	. 6
Inspection			. 1			. 1
Marketing expense	. 3	. 8	. 4	. 3	. 8	. 4
Overhead	. 5	1. 5	. 9	. 5	1. 5	. 9
Freight	1. 6	3. 0	2. 4	1. 6	3. 0	2. 4
Total expense	11. 4	13. 1	12. 2	7. 9	9. 9	8. 8
Net operating margin	−1. 0	1. 5	. 5	−2. 2	3. 2	−1. 2

TABLE 4.—*Eggs, shell: Average selling prices, purchase prices, and gross margins per dozen for eggs shipped cartoned, shipped loose, and sold loose f.o.b., 7 shippers, June and November 1957*

How shipped or sold, and month	Average selling price	Average purchase price	Average gross margin
	Cents	*Cents*	*Cents*
Shipped cartoned:			
June	36. 5	24. 0	12. 5
November	53. 1	40. 4	12. 7
Shipped loose:			
June	31. 8	23. 0	8. 8
November	44. 5	36. 9	7. 6
F.O.B. plants, loose:			
June	24. 8	17. 2	7. 6
November	36. 3	27. 9	8. 4
All eggs:			
June	33. 8	23. 0	10. 8
November	49. 0	38. 0	11. 0

TABLE 5.—*Eggs, shell: Selling prices, purchase prices, and gross margins per dozen for eggs by grade, size, and cartoned and loose, 7 midwestern assemblers, June and November 1957*

Grade, size, cartoned or loose	June 1957			November 1957		
	Average selling price	Average paying price	Average gross margin	Average selling price	Average paying price	Average gross margin
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Jumbo cartoned, A	38. 6	28. 4	10. 2	59. 4	47. 7	11. 7
Extra large cartoned, A	36. 0	23. 4	12. 6	------	------	------
Large cartoned, A	36. 2	24. 5	11. 7	56. 7	44. 9	11. 8
Medium cartoned, A	32. 2	20. 1	12. 1	46. 0	34. 1	11. 9
Small cartoned, A	------	------	------	42. 4	32. 7	9. 7
Pullets cartoned, A	------	------	------	38. 6	25. 2	13. 4
Large cartoned, B	34. 3	21. 5	12. 8	50. 4	37. 9	12. 5
Processed overseas pack	36. 6	24. 6	12. 0	------	------	------
Jumbo loose, A	33. 7	26. 6	7. 1	53. 5	49. 1	4. 4
Extra large loose, A	31. 7	23. 4	8. 3	------	------	------
Large loose, A	31. 5	24. 1	7. 4	51. 0	43. 8	7. 2
Medium loose, A	26. 0	19. 1	6. 9	40. 1	32. 9	7. 2
Pullets loose, A	23. 8	15. 6	8. 2	32. 2	25. 6	6. 6
Peewee loose, A	26. 8	18. 5	8. 3	15. 6	11. 2	4. 4
Jumbo loose, extra's	------	------	------	52. 3	42. 5	9. 8
Large loose, extra's	25. 0	18. 0	7. 0	46. 1	44. 5	1. 6
Large loose, B	28. 7	20. 6	8. 1	42. 4	37. 2	5. 2
Medium loose, B	20. 8	18. 8	2. 0	36. 4	32. 4	4. 0
Local sales loose	28. 0	23. 6	4. 4	44. 4	38. 4	6. 0
Leakers	8. 8	10. 3	−1. 5	------	------	------
Checks	25. 1	17. 1	8. 0	32. 5	22. 7	9. 8
All eggs	33. 8	23. 0	10. 8	49. 0	38. 0	11. 0

TABLE 6.—*Eggs, shell: Variations in selling price, purchase price, and gross margins per dozen, by plants, with percentages of sales cartoned and loose, 7 shippers, June and November 1957*

Plants	June 1957				November 1957			
	Percent of sales	Selling price	Purchase price	Gross margin	Percent of sales	Selling price	Purchase price	Gross margin
	Percent	*Cents*	*Cents*	*Cents*	*Percent*	*Cents*	*Cents*	*Cents*
Plant No. 1								
Cartoned eggs	45. 3	38. 1	23. 5	14. 6	22. 9	57. 5	44. 5	13. 0
Loose eggs	54. 7	29. 9	22. 2	7. 7	77. 1	42. 4	35. 4	7. 0
All eggs	100. 0	33. 8	22. 8	11. 0	100. 0	45. 8	37. 5	8. 3
Plant No. 2								
Cartoned eggs	85. 7	36. 0	23. 9	12. 1	88. 1	51. 1	40. 0	11. 1
Loose eggs	14. 3	25. 9	19. 1	6. 8	11. 9	38. 4	26. 6	11. 8
All eggs	100. 0	34. 5	23. 2	11. 3	100. 0	49. 6	38. 4	11. 2
Plant No. 3								
Cartoned eggs	50. 9	34. 9	22. 1	12. 8	58. 3	50. 7	37. 0	13. 7
Loose eggs	49. 1	30. 4	21. 9	8. 5	41. 7	43. 8	35. 7	8. 1
All eggs	100. 0	32. 7	22. 0	10. 7	100. 0	47. 8	36. 5	11. 3
Plant No. 4								
Cartoned eggs	46. 9	37. 4	24. 5	12. 9	66. 1	54. 5	39. 9	14. 6
Loose eggs	53. 1	30. 5	20. 9	9. 6	33. 9	39. 0	31. 2	7. 8
All eggs	100. 0	33. 7	22. 6	11. 1	100. 0	49. 2	37. 0	12. 2
Plant No. 5								
Cartoned eggs	90. 2	35. 7	24. 3	11. 4	91. 4	52. 1	40. 5	11. 6
Loose eggs	9. 8	24. 5	16. 3	8. 2	8. 6	32. 0	19. 1	12. 9
All eggs	100. 0	34. 6	23. 5	11. 1	100. 0	50. 4	38. 4	12. 0
Plant No. 6								
Cartoned eggs	62. 4	35. 9	24. 0	11. 9	89. 9	52. 7	40. 6	12. 1
Loose eggs	37. 6	28. 9	23. 0	5. 9	10. 1	38. 6	31. 6	7. 0
All eggs	100. 0	33. 3	23. 6	9. 7	100. 0	51. 3	39. 7	11. 6
Plant No. 7								
Cartoned eggs	46. 9	38. 4	25. 6	12. 8	66. 1	55. 4	41. 6	13. 8
Loose eggs	53. 1	31. 3	21. 5	9. 8	33. 9	39. 6	31. 4	8. 2
All eggs	100. 0	34. 6	23. 4	11. 2	100. 0	50. 1	38. 1	12. 0
All 7 plants								
Cartoned eggs	59. 2	36. 5	24. 0	12. 5	66. 2	53. 0	40. 5	12. 5
Loose eggs	40. 8	30. 0	21. 5	8. 5	33. 8	41. 1	33. 2	7. 9
All eggs	100. 0	33. 8	23. 0	10. 8	100. 0	49. 0	38. 0	11. 0

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